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(54) **ORGANOGENESIS FROM DISSOCIATED CELLS**

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(57) **ABSTRACT**

A method assay for rapidly and reproducibly generating hair follicles from dissociated epithelial and mesenchymal cells is disclosed. The method serves both as a tool for measuring the trichogenic (i.e., hair growth-inducing) property of cells and for studying the mechanisms dissociated cells employ to assemble an organ. In a method of this application dissociated cells, isolated from newborn mouse skin, are injected into adult mouse truncal skin, hair follicles develop. This process involves the aggregation of epithelial cells to form clusters which are sculpted by apoptosis to generate "infundibular cysts". From the "infundibular cysts" hair germs form followed by follicular buds and then pegs which grow asymmetrically to differentiate into cycling mature pilosebaceous structures. Using various techniques, exposure of the "infundibular cysts" by puncturing, piercing, or scratching the skin and, in an approach, covering the exposed cysts with a wound dressing material produced egressing hair follicles.

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